states in this country and in twenty-two foreign countries; of yellow fever in five South and Central American countries, and of malaria in ten southern states in this country.

One need read only "An American Doctor's Odyssey,' by Dr. Victor Heiser, to be fascinated by the romance and thrill of scientific achievement on a world-wide front, possible only under this Foundation. Partly as a war measure, the Foundation did much to control the spread of tuberculosis in France by campaigns of public education in hygiene and the training of women as health visitors.

### ROCKEFELLER CONTRIBUTION TO CALIFORNIA

San Franciscans should ever remember that he did not forget them in their time of need, and donated $100,000 to the San Francisco Earthquake Sufferers' Fund in April, 1906. The University of California has been the recipient also of thousands of dollars of donations from Rockefeller which went to the Institute of Social Sciences, Institute of Child Welfare, and the Institute of Experimental Biology.

### FAR-REACHING RESULTS OF ROCKEFELLER'S DONATIONS

One can perceive at a glance that, because of Rockefeller, millions of people all over the world are living who would be dead; millions of others are free of pain and enjoying a state of well-being and happiness because of his far-sightedness, wisdom, and generosity. He gave as no man ever gave before. His theory was to give in such a manner as not to make paupers of those who receive. Before him people groped their way without guide or chart in the ever-widening field of philanthropic endeavor. He, the Original Father of Big Business, organized and planned his donations upon as distinct lines of progress as his other business affairs. His goal was to make wealth of greater use to the present and future generations. His idea was that only by educating people to help themselves, do we strike at the root of many of the evils of the world. Just as he was reputed to have the "finest organizing mind since Napoleon," he was the world's greatest philanthropist and organizer in the science of giving, the greatest creator of charitable and scientific foundations that have contributed immeasurably to human welfare all over the globe. Indeed, if one reflects if his millions had been dissipated, as often occurs, and had not been turned into these great channels for the relief of human suffering all over the world, inestimable would have been the loss to mankind. Thus we see, through their devotion and service to humanity, why and to what extent the world honors and is everlastingly indebted to these three great men—Rockefeller, Osler, and Welch.

With the rapidly changing economic conditions and the drastic laws which are being enacted, it requires no unusual sense of prophecy to see that we are now in a new era. The Government is drawing on these great reservoirs of wealth as never before, to which science, education, and charity have looked for aid. The colossal Rockefeller charities doubtless will never be repeated. Can wealth be concentrated in private hands to society's advantage? This is one of the basic questions which confronts mankind today. In Rockefeller's case the answer is undeniably and emphatically in the affirmative. It is a direct challenge to the clamorous claims of Communism today.

384 Post Street.

# CLINICAL NOTES AND CASE REPORTS

## ARTIFICIAL INSEMINATION

*By* ALBERT T. GOLDBERG, M.D.
AND
MILTON M. SCHATZ, M.D.
*Fresno*

HISTORICAL RÉSUMÉ.—For centuries the idea of artificially impregnating animals has been entertained; the Arabians in the fourteenth century, so it was reported, having successfully carried out this procedure in mares. In 1700 the eggs of fishes were artificially fertilized, and in 1780 Spallanzani succeeded in artificially impregnating bitches. In the present day the science of breeding domestic animals and pisciculture by artificial fertilization has a definite place.

John Hunter, in 1776, successfully produced conception in the wife of a man with hypospadias by injecting the husband's semen into the vaginal vault. In 1866, J. Marion Sims reported favorable results from direct intra-uterine insemination.[1]

### STERILITY

Sterility, in many instances, is due, not to definite pathological changes in the genital tract of either husband or wife, but rather to the fact that the spermatozoa may not be deposited directly into the cervical canal. Meeker[2] is in entire agreement with the conclusions of Huhner on this point. It is well known that frequently in the ordinarily acid vagina the life of the spermatozoa is very brief. Post-coital examinations show diminished mobility and many dead forms within a few minutes after ejaculation.[2]

Approximately one in every ten marriages is childless. Modern medicine should decrease this percentage; and every known method at our disposal should be employed in cases of couples who wish and are anxious to have children.

### TECHNIQUE

A simple procedure, designed to overcome sterility, is that described by Mason[1] and Cohen,[3] which consists of introducing two cubic centimeters of semen into the uterine cavity very slowly, via a uterine cannula placed securely in the cervical canal. The injection should be performed very slowly in order to prevent expulsion of the semen

1 Mason, Lyman W.: Artificial Intra-uterine Insemination, Colorado Med., 26:86-89 (March), 1929.

2 Meaker, Samuel R.: The Place of Artificial Insemination in the Treatment of Sterility, Boston M. & S. J., 191:495-497 (September 11), 1924.

3 Cohen, Joseph: Artificial Insemination: Report of Cases, New Orleans M. & S. J., 85:817-819 (May), 1933.

by uterine contractions; the object being to deposit the semen within the uterine cavity, and not to force the material into the tubes. There are four methods of procuring semen: masturbation; coitus interruptus, using a small jar; natural coitus, followed by aspiration from the vagina, and coitus condomatus.[4]

The following is a report of an interesting case in which we were successful in producing conception by artificial means. In this particular instance the principal reason for the attempt at artificial insemination was the extreme desirability of the couple to have children, and the growing dissension between husband and wife because of this barrenness.

REPORT OF CASE

Husband: Age, 33 years. History negative for gonorrhea, syphilis, and mumps. Has brothers and sisters who have children. Physical examination negative in all essentials. Blood Wassermann negative. Routine urinalysis negative. Smear made after prostatic massage shows no pus cells or any other abnormal findings. Condom specimen, examined within twenty minutes after intercourse, shows large number of spermatozoa, very actively motile, normal in appearance, with approximately 10 per cent nonmotile forms. No pus or bacteria found in this specimen.

Wife: Age, 22 years. Married two years and six months. History negative for gonorrhea and syphilis. Has brothers and sisters who have children. States that since she has been married both she and her husband have been very desirous of having children. No contraceptive measures of any kind used. Menstrual history: onset age 12 years, regular, interval twenty-eight days, duration four to five days, no dysmenorrhea. Has never been pregnant. No history of surgery, pelvic or otherwise. Last menstrual period April 16, 1937. Patient had a B. M. R. test made four months previously because of overweight, with reading of minus 24. Has been taking thyroid, one grain, three times a day. Repeated basal metabolic rate taken three months later showed a reading of minus 6.

Physical examination revealed a moderately obese young, white female 5 feet 6 inches tall and weighing 182½ pounds. Physical examination otherwise of no significance, with the exception of the pelvic examination findings of a second degree retroverted uterus. Vaginal media normally acid (Litmus). Cervical smear negative for bacteria and pus. Blood Wassermann negative. Routine urinalysis negative. Attempts to mechanically correct this malposition were fruitless.

The problem of artificial insemination was discussed, and both husband and wife desired that this procedure be carried out.

The husband was instructed to thoroughly wash his penis with soap and water, and, after the performance of coitus condomatus, to place the condom in an envelope and keep same at body temperature by placing it in his axilla. Examination of the specimen within twenty minutes after intercourse showed it to be normal, as described above.

The patient was placed in the lithotomy position, a bivalve speculum inserted and the area about the cervix cleansed, but not with antiseptic solution, so that no spermatozoa would be devitalized by the latter. Two cubic centimeters of semen were drawn up into a warm sterile syringe and through a sterile uterine cannula was injected very slowly, and with the least amount of pressure, into the cervical canal. The cannula was gently withdrawn and the patient allowed to rest for half an hour. This procedure was carried out on April 26, 1937, ten days after the last menstrual period, and was repeated three days later.

*Course.*—The following menstrual period, due May 23, 1937, failed to occur, as did the succeeding one. No Ascheim-Zondek test was done; but at the end of a two months' period, on June 6, 1937, definite signs and symptoms of pregnancy were observed. Pelvic measurements were adequate and the patient was given prenatal care, having her blood pressure, weight, and urine examined weekly. The patient gained twenty pounds during her pregnancy, her diet having been closely watched. The prenatal course was uneventful.

On January 24, 1938, she went into spontaneous labor. Diagnosis of R. O. A. was made with F. H. T. of 154, clearly audible in the R. L. Q. After six hours of labor, the cervix had about one centimeter of dilatation, when patient had a sudden hemorrhage of about 200 cubic centimeters of blood, which continued as a slow hemorrhage for about half an hour, during which time the fetal heart tones increased in rapidity and were hardly audible and, therefore, difficult to count. The patient showed very little sign of shock. Diagnosis of partial premature separation of placenta was made, and we performed an immediate, low-cervical cesarean section, and a living male infant weighing 7 pounds 14 ounces was delivered. The patient made an uneventful recovery, with the exception of a slight subcutaneous infection.

1212 Pacific Southwest Building.

[4] Queries and Minor Notes, J. A. M. A., 103:432-433 (August 11), 1934.

## INTESTINAL INTUSSUSCEPTION IN AN INFANT: OPERATION, WITH RECOVERY

*By* A. H. NEWTON, M.D.
*Yreka*

INTESTINAL intussusception in infants apparently has no etiological agent. Intussusception occurs most frequently at the ileocecal juncture, where vigorous peristalsis is countered by antiperistalsis in the cecum. This may be a factor as to its genesis. Intussusception of the large intestine may be ileocecal, in which the head of the cecum forms the apex of the invaginated bowel. In the small intestine there may be ileocolic invagination, in which the lower ileum prolapses through the ileocecal valve.

I wish to report a case in an eight months old infant in which there was an ileocecal invagination, the cecum forming the apex of the invaginated bowel which developed into an ileocolic invagination; the ileocecal continuity of the intestinal lumen between the oral and distal segments remained intact until the day preceding surgery. My case report presented the four cardinal symptoms of intussusception: (1) periodic attacks of pain; (2) vomiting; (3) passage of mucus and blood by rectum; and (4) presence of a palpable tumor.

REPORT OF CASE

B. A., aged eight months, male; birth weight, 7½ pounds; weight on admission to the hospital, 21 pounds. Previous illness, none. Present illness: The patient was a normal, healthy, active baby prior to the onset of present illness. The patient was awakened from a sound sleep on Friday, November 27, 1936, with severe crying and evidence of abdominal pain. This was followed by bowel evacuation, and a few hours later vomiting ensued which was persistent with successive bowel movements of blood and mucus. Vomiting and bowel movements persisted through November 28, The patient was brought to the hospital on November 29, and examination revealed the infant to be dehydrated; temperature 105 degrees Fahrenheit, rectal. The abdomen was distended, and a palpable, movable mass was present in the left lower quadrant. The mass was felt by rectal examination as well. A diagnosis of intussusception of the descending colon was made.

The baby was taken to the x-ray department, and under the fluoroscope a barium enema was given from a suspended reservoir can three feet above the table. With